apprenticeship
FRAMEWORK

Nuclear Working

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Apprenticeships

Nuclear Working

Issued by: Cogent

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This framework is for use in: England	Level 2

Short description

The Nuclear Working Apprenticeship Framework provides work based training for young people and adults wishing to enter the nuclear sector. Apprentices would undertake skills and knowledge training in one of the following two areas, nuclear decommissioning or radiation protection.

There is one level of Apprenticeship contained in this framework:
• The Intermediate Level Apprenticeship in Nuclear Working (usually takes 12 to 18 months to complete)

The framework contains details of vocational qualifications; knowledge based technical qualifications, Functional Skills in (Maths, English, ICT), Personal Learning and Thinking Skills and employee rights and responsibilities required for an apprenticeship in Nuclear Working.

Apprentices undertake training on-the-job at their workplace and off-the-job usually delivered by a local training provider or Further Education College.

Contact information

Proposer of this framework

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Purpose of this framework

Summary of the purpose of the framework

This framework has been designed to meet the requirements for the type of work undertaken in the Nuclear Industry. The UK's Nuclear Industry employs over 50,000 people and provides about 18% of the country's electricity. Nuclear power is an efficient source of energy that helps to cut down on carbon emissions, and the government has outlined plans to build more nuclear power stations. Once a nuclear power station reaches the end of its working life it must be safely shut down and decommissioned. With the advent of 'new build' for a fleet of modern nuclear power stations, as well as existing operations and decommissioning means there are a number of opportunities across the sector.

The industry is supported by a wide variety of supply chain companies, such as engineering and construction contractors, fabricators of specialist equipment, manufacturers and specialist service providers which may provide further opportunities for employment.

After undergoing this Intermediate Level Apprenticeship Framework, skilled operatives and technicians could find themselves working in a variety of roles within the Nuclear Industry. A Decommissioning Operative would be involved in the safe decommissioning of plant and equipment on a licensed nuclear site. A Radiation Monitor would play a key role in the safe monitoring of personnel and work environments.

Within the industry there are many opportunities to progress to technician, supervisory or management roles. British Nuclear Industry skills are also highly valued abroad.

There will be an ongoing need to attract new young people and adults to meet emerging technological challenges such as the expected expansion due to new build as well as to replace the ageing workforce within the sector. The Apprenticeship Framework will help to ensure that the skills pipeline is robust both in terms of quantity and capability.

Aims and objectives of this framework (England)

Aim
To provide a trained workforce for the nuclear industries that will enable them to compete in a global market.

The objectives of this framework are:

1. To provide the skilled operators to meet future demand forecasted by the nuclear industry.

2. To provide a structured training framework that will provide the skills needed to decommission and carry out radiation protection activities.

3. To provide a development framework for existing staff in the nuclear industry to up-skill their current vocational skills and knowledge that will enable them to meet the future challenges of new technologies and changing production processes.

4. To provide progression opportunities for apprentices both within the nuclear industry and employment in other sectors as well as for those wishing to engage in further study in Further or Higher Education.

5. To attract new talent into the nuclear industry from a range of backgrounds, in order to meet industry requirements.

Entry conditions for this framework

Apprenticeship applicants will be expected to attend an interview with the employer/ training provider to assess their suitability for entry on to the framework. The interview provides an opportunity to talk directly to the applicant and discuss an individual's previous learning and experience. From this interview the employer will be able to decide whether a candidate is suitable using some of the following guidance.

Intermediate Level Apprenticeship

The Intermediate Level Apprenticeship in Nuclear Working is open to all people aged 16 or over. Due to the competition for places the following skills and attributes relevant to working within the Nuclear Industry may be considered as part of the application process;
• motivation to succeed within industry

- an awareness of the demands of the Apprenticeship
- willingness to comply with employer/training provider terms and conditions of employment
- have the ability to apply learning in the workplace
- willingness to work with due regard to Health and Safety of self and others
- effective communication with a range of people.

Please Note:
As part of the entry conditions for employment in the nuclear industry all applicants will have to undergo a security check.

The following examples of evidence can be used to support some of the above statements, such as;
- previous work experience or employment or
- voluntary or community based work or
- achievement of GCSEs (A*-E) or equivalent qualifications in Maths, English and Science or
- achievement of a Foundation/ Higher Diploma in Manufacturing & Product Design or Foundation/ Higher Diploma in Engineering or
- achievement of Awards, Certificates or Diplomas in a related industry such as Science or Engineering or
- proof of completion of non-accredited courses.

All Apprenticeship applicants should be aware of the varied working conditions that may include;
- working at heights
- shiftwork (including nights and weekends)
- 365 day operations
- working outdoors
- wearing specialist safety equipment
- working within high hazard environment.

Level 2

Title for this framework at level 2

Intermediate Level Apprenticeship in Nuclear Working

Pathways for this framework at level 2

Pathway 1:	Nuclear Decommissioning
Pathway 2:	Radiation Protection

Level 2, Pathway 1: Nuclear Decommissioning

Description of this pathway

Nuclear Working (Decommissioning Operative)

Entry requirements for this pathway in addition to the framework entry requirements

None.

Job title(s)	Job role(s)
Decommissioning Operative	Safely dismantle, remove and dispose of plant and equipment, including pumps, valves, tanks and vessels.

Qualifications

Competence qualifications available to this pathway

C1 - Level 2 NVQ Diploma in Nuclear Decommissioning (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
C1a	500/6185/9	PAA\VQSET	60	254	N/A

Knowledge qualifications available to this pathway

K1 - BTEC Level 2 Extended Certificate in Engineering (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K1a	500/7577/9	Edexcel	30	180	N/A

K2 - BTEC Level 2 Diploma in Engineering (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
K2a	500/7576/7	Edexcel	60	360	N/A

Combined qualifications available to this pathway

N/A

Notes on competence and knowledge qualifications (if any)

K1 or K2 will provide the underpinning knowledge and understanding for C1

The decision on which knowledge qualification the apprentices will undertake will be made by the training provider and employer, based on the experience of the apprentice, future job role requirements and the complexity of the employer's operations. It is satisfactory to achieve this apprenticeship by undertaking the minimum knowledge qualification of 180 Guided Learning Hours.The knowledge qualification of 360 Guided Learning Hours will provide a more in-depth technical knowledge if required.

The credit values and guided learning hours quoted in the above tables are the minimum for the qualification as stated on the Register of Regulated Qualifications. These credit values and guided learning hours may vary according to specific pathways/ options taken within qualifications. For further details please refer to the Register of Regulated Qualifications (http://register.ofqual.gov.uk/).

Transferable skills (England)

Functional Skills / GCSE (with enhanced functional content) and Key Skills (England)

English	Minimum level or grade	Credit value
Functional Skills qualification in English	1	5
GCSE qualification (with enhanced functional content)	E	5
Key Skills qualification in Literacy achieved either before September 2013 as part of the Apprenticeship, or...*	1	5
GCSE Qualification in English*	C	N/A
A' Level or AS Level qualification in English Language*	E	N/A
A' Level or AS Level qualification in English*	E	N/A
A' Level or AS Level qualification in English Language and Literature*	E	N/A
GCSE or O' Level qualification in English Language**	A	N/A
A' Level or AS Level qualification in English Language**	A	N/A
A' Level or AS Level qualification in English Literature**	A	N/A
A' Level or AS Level qualification in English Language and Literature**	A	N/A

* *achieved before September 2012 and within the 5 years immediately prior to starting an Apprenticeship.*

** *achieved before September 2012, otherwise at any time prior to starting the Apprenticeship.*

Mathematics	Minimum level or grade	Credit value
Functional Skills qualification in Mathematics	1	5
GCSE qualification (with enhanced functional content) in Mathematics	E	5
Key Skills qualification in Application of Number achieved either before September 2013 as part of the Apprenticeship, or... *	1	5
GCSE qualification in Mathematics*	C	N/A
A' level or AS Level qualification in Mathematics*	E	N/A
A' Level or AS Level qualification in Pure Mathematics*	E	N/A
A'Level or AS Level qualification in Further Mathematics*	E	N/A
GCSE or O'Level qualification in Mathematics**	A	N/A
A' Level or AS Level qualification in Mathematics**	A	N/A
A' Level or AS Level qualification in Pure Mathematics**	A	N/A
A' Level or AS Level qualification in Further Mathematics**	A	N/A

* *achieved before September 2012 and within the 5 years immediately prior to starting an Apprenticeship.*

** *achieved before September 2012, otherwise at any time prior to starting the Apprenticeship.*

ICT	Minimum level or grade	Credit value
Functional Skills qualification in Information and Communications Technology (ICT)	1	5
GCSE qualification in ICT (with enhanced functional content)	E	5
Key Skills qualification in ICT achieved either before September 2013 as part of the Apprenticeship, or...*	1	5
GCSE qualification in ICT*	C	N/A
A' Level or AS Level qualification in ICT*	E	N/A
GCSE or O'Level qualification in ICT**	A	N/A
A' Level or AS Level qualification in ICT**	A	N/A

* *achieved before September 2012 and within the 5 years immediately prior to starting an Apprenticeship.*

** *achieved before September 2012, otherwise at any time prior to starting the Apprenticeship.*

Inclusion of Information and Communications Technology (ICT)

(no information)

Progression routes into and from this pathway

Progression into this pathway:

There are no pre-defined routes of entry to the Nuclear Working Apprenticeship; however, new entrants to the industry may be looking to progress from the following areas:

• Work based qualifications such as NVQs/ SVQs or vocationally related qualifications in an Engineering related subject. (Examples may include: BTEC's, City & Guilds, PAA/VQ-SET Diplomas/ Certificates/ Awards)

• GCSEs in Science, Maths or Engineering also provide a strong platform for progression on to the framework.

• Foundation/ Higher Diplomas in Engineering or Manufacturing & Product Design also provide an excellent opportunity for progression in to the nuclear industries.

• Previous experience in the nuclear industry or a related discipline can also be an appropriate

route of entry.

Please Note:
As part of the entry conditions for employment in the nuclear industry all applicants will have to undergo a security check.

Progression from this pathway:

Following completion of this Intermediate Level Apprenticeship there are several options open to the successful candidate who wishes to continue their development in order to progress their career. There are opportunities to continue to undertake further vocational training or academic qualifications. These may include (but are not exclusive to) the following:

- Advanced Level Apprenticeship in related area.
- Higher/ Advanced Diploma in Engineering or Diploma in Manufacturing and Product Design
- Developing a career in coaching through undertaking Assessor and Verifier Awards
- Qualifications in a related area, including (but not limited to) Health & Safety, Training & Development, Business Improvement Techniques and Supervisory Management.
- Cogent Nuclear Job Context training and qualifications (www.cogent-prospectus.com)

Within the industry there are many opportunities to progress to technician, supervisor or management roles. These opportunities will increase over the coming years with the advent of new build and as the impact of an ageing workforce takes effect.

Successful completion of the Intermediate Level Apprenticeship could lead to one of the following job roles:

- Decommissioning Operative
- Decommissioning Team Leader

For a more in-depth look at careers within the Cogent Industries, please look at our careers pathway website www.cogent-careers.com

Delivery and assessment of employee rights and responsibilities

This Employee Rights and Responsibilities (ERR) section has no QCF Credit Value.

It is important that all employees understand and can demonstrate an understanding of their rights & responsibilities as an employee.

The Cogent Employee's Rights and Responsibilities (ERR) Workbook and Assessment Document has been designed to assist employers and training providers and should be used to deliver this mandatory element of the Apprenticeship Framework.

The content is as follows: -

1. Statutory rights and responsibilities under Employment Law.
2. Procedures and documentation that affect the relationship between employee and employer.
3. Sources of information and advice on employment rights and responsibilities.
4. The role played by an Apprentice's occupation in the organisation and industry.
5. Career pathways open to an Apprentice.
6. The types of representative bodies relevant to the industry and organisation and their main roles and responsibilities.
7. Where and how to get advice on the industry, occupation, training and careers.
8. Organisational principles and codes of practice.
9. Issues of public concern that affect the organisation and industry.

It is essential that the Apprentice can demonstrate competence in ERR and, as a result, is required to provide documentary evidence confirming their achievements. Examples of how the evidence can be gathered by individuals include;

- completing a company induction,
- attending relevant taught off-the-job training sessions
- on-the-job assessment.

When applying for the Intermediate Level Apprenticeship the training provider or employer will

provide evidence that ERR has been achieved by submitting a copy of the completed assessment document, signed by both the apprentice and the assessor.

Time spent on ERR will contribute towards meeting the minimum 280 GLH per year requirement (England). (Please see section on Guided Learning Hours on-the-job/off-the-job)

To obtain a copy of the workbook and assessment document, please visit the Apprenticeships section of the Cogent website. (www.cogent-ssc.com)

Level 2, Pathway 2: Radiation Protection

Description of this pathway

Nuclear Working (Radiation Monitor)

Entry requirements for this pathway in addition to the framework entry requirements

None

Job title(s)	Job role(s)
Radiation Monitor	Monitor radiation levels of personnel and the working environment.

Qualifications

Competence qualifications available to this pathway

N/A

Knowledge qualifications available to this pathway

N/A

Combined qualifications available to this pathway

B1 - Level 2 NVQ Diploma in Radiation Protection (QCF)					
No.	Ref no.	Awarding organisation	Credit value	Guided learning hours	UCAS points value
B1a	500/6152/5	PAA\VQSET	38	162	N/A

Notes on competence and knowledge qualifications (if any)

Level 2 NVQ Diploma in Radiation Protection (QCF) - 38 Credits

Apprentices must complete 14 Units totalling a minimum of 38 Credits. 12 mandatory units and 2 optional units (1 competence, 1 knowledge).

[C] = Competence
[K] = Knowledge

MANDATORY UNITS

N225 [C] Respond to Radiation Incidents Within Ionising Radiation Environments – *3 Credits*
N225 [K] How to Respond to Radiation Incidents Within Ionising Radiation Environments – *4 Credits*

N226 [C] Monitor Radiation Hazards within Ionising Radiation Environments – *3 Credits*
N226 [K] How to Monitor Radiation Hazards within Ionising Radiation Environments – *3 Credits*

N227 [C] Monitor Radiation Conditions During Work Activities Within Ionising Radiation Environments – *2 Credits*
N227 [K] How to Monitor Radiation Conditions During Work Activities Within Ionising Radiation Environments – *2 Credits*

N228 [C] Monitor People During Radiation–Related Work Activities Within Ionising Radiation Environments – *2 Credits*
N228 [K] How to Monitor People During Radiation–Related Work Activities Within Ionising Radiation Environments – *2 Credits*

N229 [C] Monitor Environmental Conditions During Radiation-Related Work Activities Within Ionising Radiation Environments – *3 Credits*
N229 [K] How to Monitor Environmental Conditions During Radiation-Related Work Activities Within Ionising Radiation Environments – *3 Credits*

N230 [C] Test the Functions of Radiation Protection Equipment Within Ionising Radiation Environments – *3 Credits*
N230 [K] How to Test the Functions of Radiation Protection Equipment Within Ionising Radiation Environments – *3 Credits*

OPTIONAL UNITS

Learners must achieve 2 optional units totalling a minimum of 4 Credits, consisting of 1 knowledge unit and 1 competence unit from the combinations outlined below. For example; if unit N231 [K] is chosen, then unit N231 [C] must also be completed.

N231 [C] Undertake Radiation-Related Work Activities within Ionising Radiation Environments – *2 Credits*
N231 [K] How to Undertake Radiation-Related Work Activities within Ionising Radiation Environments – *2 Credits*

Or

N232 [C] Record Information on Radiation Protection within Ionising Radiation Environments – *2 Credits*
N232 [K] How to Record Information on Radiation Protection within Ionising Radiation Environments – *2 Credits*

Transferable skills (England)

Functional Skills / GCSE (with enhanced functional content) and Key Skills (England)

English	Minimum level or grade	Credit value
Functional Skills qualification in English	1	5
GCSE qualification (with enhanced functional content)	E	5
Key Skills qualification in Literacy achieved either before September 2013 as part of the Apprenticeship, or...*	1	5
GCSE Qualification in English*	C	N/A
A' Level or AS Level qualification in English Language*	E	N/A
A' Level or AS Level qualification in English*	E	N/A
A' Level or AS Level qualification in English Language and Literature*	E	N/A
GCSE or O' Level qualification in English Language**	A	N/A
A' Level or AS Level qualification in English Language**	A	N/A
A' Level or AS Level qualification in English Literature**	A	N/A
A' Level or AS Level qualification in English Language and Literature**	A	N/A

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Mathematics	Minimum level or grade	Credit value
Functional Skills qualification in Mathematics	1	5
GCSE qualification (with enhanced functional content) in Mathematics	E	5
Key Skills qualification in Application of Number achieved either before September 2013 as part of the Apprenticeship, or... *	1	5
GCSE qualification in Mathematics*	C	N/A
A' level or AS Level qualification in Mathematics*	E	N/A
A' Level or AS Level qualification in Pure Mathematics*	E	N/A
A'Level or AS Level qualification in Further Mathematics*	E	N/A
GCSE or O'Level qualification in Mathematics**	A	N/A
A' Level or AS Level qualification in Mathematics**	A	N/A
A' Level or AS Level qualification in Pure Mathematics**	A	N/A
A' Level or AS Level qualification in Further Mathematics**	A	N/A

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ICT	Minimum level or grade	Credit value
Functional Skills qualification in Information and Communications Technology (ICT)	1	5
GCSE qualification in ICT (with enhanced functional content)	E	5
Key Skills qualification in ICT achieved either before September 2013 as part of the Apprenticeship, or...*	1	5
GCSE qualification in ICT*	C	N/A
A' Level or AS Level qualification in ICT*	E	N/A
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Inclusion of Information and Communications Technology (ICT)

(no information)

Progression routes into and from this pathway

Progression into this pathway:

There are no pre-defined routes of entry to the Nuclear Working Apprenticeship; however, new entrants to the industry may be looking to progress from the following areas:

• Work based qualifications such as NVQs/ SVQs or vocationally related qualifications in an Engineering related subject . (Examples may include: BTEC's, City & Guilds, PAA/VQ-SET Diplomas/ Certificates/ Awards)
• GCSEs in Science, Maths or Engineering also provide a strong platform for progression on to the framework.
• Foundation/ Higher Diplomas in Engineering or Manufacturing & Product Design also provide an excellent opportunity for progression in to the nuclear industry.
• Previous experience in the nuclear industry or a related discipline can also be an appropriate

route of entry.

Please Note:
As part of the entry conditions for employment in the nuclear industry all applicants will have to undergo a security check.

Progression from this pathway:

Following completion of this Intermediate Level Apprenticeship there are several options open to the successful candidate who wishes to continue their development in order to progress their career. There are opportunities to continue to undertake further vocational training or academic qualifications. These may include (but are not exclusive to) the following:
• Advanced Level Apprenticeship in related area.
• Higher/ Advanced Diploma in Engineering or Diploma in Manufacturing and Product Design
• Developing a career in coaching through undertaking Assessor and Verifier Awards
• Qualifications in a related area, including (but not limited to) Health & Safety, Training & Development, Business Improvement Techniques and Supervisory Management.
• Cogent Nuclear Job Context training and qualifications (www.cogent-prospectus.com)

Successful completion of the Intermediate Level Apprenticeship could lead to one of the following job roles:

• Radiation Monitor
• Radiation Monitor Team Leader
• Health Physics Monitor

For a more in-depth look at careers within the Cogent Industries, please look at our careers pathway website www.cogent-careers.com.

Delivery and assessment of employee rights and responsibilities

This Employee Rights and Responsibilities (ERR) section has no QCF Credit Value.

It is important that all employees understand and can demonstrate an understanding of their rights & responsibilities as an employee.

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The content is as follows: -

1. Statutory rights and responsibilities under Employment Law.
2. Procedures and documentation that affect the relationship between employee and employer.
3. Sources of information and advice on employment rights and responsibilities.
4. The role played by an Apprentice's occupation in the organisation and industry.
5. Career pathways open to an Apprentice.
6. The types of representative bodies relevant to the industry and organisation and their main roles and responsibilities.
7. Where and how to get advice on the industry, occupation, training and careers.
8. Organisational principles and codes of practice.
9. Issues of public concern that affect the organisation and industry.

It is essential that the Apprentice can demonstrate competence in ERR and, as a result, is required to provide documentary evidence confirming their achievements. Examples of how the evidence can be gathered by individuals include;

- completing a company induction,
- attending relevant taught off-the-job training sessions
- on-the-job assessment.

When applying for the Intermediate Level Apprenticeship the training provider or employer will provide evidence that ERR has been achieved by submitting a copy of the completed assessment document, signed by both the apprentice and the assessor.

Time spent on ERR will contribute towards meeting the minimum 280 GLH per year requirement (England). (Please see section on Guided Learning Hours on-the-job/off-the-job)

To obtain a copy of the workbook and assessment document, please visit the Apprenticeships section of the Cogent website. (www.cogent-ssc.com)

The remaining sections apply to all levels and pathways within this framework.

How equality and diversity will be met

The Intermediate Level Apprenticeship in Nuclear Working aims to promote diversity, opportunity and inclusion by offering high-quality, learning opportunities.

The delivery of the Intermediate Level Apprenticeship Framework must be in environments free from prejudice and discrimination where all learners can contribute fully and freely and feel valued.

There must be no overt or covert discriminatory practices in selection and recruitment of Apprentices to the programme, which is available to all people, regardless of gender, ethnic origin, religion/belief, sexual orientation or disability who meet the stated selection criteria.

Issues
Gender: the nuclear industry is heavily male dominated with less than 1% of women represented within the sector.

Ethnicity: the nuclear industry has an under-representation of ethnic minority groups within the workforce .

Age: the nuclear industry has an ageing workforce with less than 5% under 25 years of age.

Barriers
Geographical location of the various nuclear industry sites is away from areas with high concentrations of ethnic minorities. Misconception that nuclear industry work is dirty and dangerous. Staff turnover limited due to good levels of pay giving high retention rates. Also the geographical isolation of many sites contributes to the high retention rates.

Actions
Cogent have introduced a series of case studies on the Careers Pathways web site (www.cogent-careers.com) to encourage people from all backgrounds to enter the nulcear industry.

Cogent works very closely with the National Skills Academy for Nuclear to promote various initiatives such as Energy Foresight within schools. (www.nuclear.nsacademy.co.uk)

Cogent regularly support regional/ national careers fairs/ skills events to promote apprenticeships, providing an ideal opportunity to address issues faced by women and ethnic minorities.

Cogent are also working with representative groups such as the United Kingdom Resource Centre, engaging with their Women in Science and Engineering Work programmes.

On and off the job guided learning (England)

Total GLH for each pathway

Legal Requirement:

The Specification of Apprenticeship Standards for England (SASE) states that apprentices must complete a minimum of 280 Guided Learning Hours (GLH) per year when undertaking either an Intermediate Level Apprenticeship or Advanced Level Apprenticeship. A minimum of 100 GLH (or 30% of GLH whichever is the greater) must be completed each year of the Intermediate Level Apprenticeship or Advanced Level Apprenticeship away from the apprentices area of work ('off-the-job').

Definition:
• 'on-the-job' = Time spent learning in the workplace
• 'off-the-job' = Time spent away from the area of work. This could be time spent with a training provider or Further Education College or completing functional skills.

To understand the overall make up of the GLH within a pathway, the 'off-the-job' pathways below should be linked to their corresponding 'on-the-job' pathways described later on in this document.

The total amounts of Guided Learning Hours for each pathway within the Nuclear Working Apprenticeship Framework are as follows:

Intermediate Level Nuclear Decommissioning Pathway 1a: 664 GLH.
Using the Level 2 NVQ Diploma in Nuclear Decommissioning (254 GLH) and the knowledge qualification BTEC Level 2 Extended Certificate in Engineering (180 GLH).
This pathway will take 15 months to complete.

The minimum amount of 'on-the-job' and 'off-the-job' GLH to complete this apprenticeship is 664 GLH. This figure includes 230 GLH of additional time necessary to meet all of the framework requirements covering functional skills, ERR, mentoring and company training.

Intermediate Level Nuclear Decommissioning Pathway 1b: 844 GLH.
Using the Level 2 NVQ Diploma in Nuclear Decommissioning (254 GLH) and the knowledge qualification BTEC Level 2 Diploma in Engineering (360 GLH).
This pathway will take 24 months to complete.

The minimum amount of 'on-the-job' and 'off-the-job' to GLH to complete this apprenticeship is 844 GLH. This figure includes 230 GLH of additional time necessary to meet all of the framework requirements covering functional skills, ERR, mentoring and company training.

Intermediate Level Radiation Protection Pathway 2a: 392 GLH.
Using the Level 2 NVQ Diploma in Radiation Protection (162 GLH). This is a combined qualification with 114 GLH designated as 'off-the-job' learning and 48 GLH designated as 'on-the-job' learning. This pathway will take 12 months to complete.

The minimum amount of 'on-the-job' and 'off-the-job' GLH to complete this apprenticeship is 392 GLH. This figure includes 230 GLH of additional time necessary to meet all of the framework requirements covering functional skills, ERR, mentoring and company training.

Minimum off-the-job guided learning hours

Off-the-job GLH for Intermediate Level (Level 2) Pathways:

Below are the minimum 'off-the-job' guided learning hours (GLH) for the pathways of Nuclear Decommissioning and Radiation Protection, dependant on the qualifications selected. The components of the framework undertaken will be decided by the employer, provider and apprentice and be based on the employer's requirements and the prior achievements and prior experience of the apprentice.

Intermediate Level Nuclear Decommissioning Pathway 1a: 410 GLH
It is expected that the apprentice will complete 410 GLH 'off-the-job' in the first year of the apprenticeship, using the knowledge qualification BTEC Level 2 Extended Certificate in Engineering (180 GLH). This will exceed the minimum legal requirement of 30% or 100 GLH 'off-the-job' per year.

This figure includes 230 GLH of additional time necessary to meet all of the framework requirements covering functional skills, ERR, mentoring and company training. This pathway will take 15 months to complete.[See 'on-the-job' pathway 1a]

Intermediate Level Nuclear Decommissioning Pathway 1b: 590 GLH
It is expected that the apprentice will complete 410 GLH 'off-the-job' in the first year of the apprenticeship and a further 180 GLH to be completed over months 13 to 24, using the knowledge qualification BTEC Level 2 Diploma in Engineering (360 GLH). This will exceed the minimum legal requirement of 30% or 100 GLH 'off-the-job' per year.

This figure includes 230 GLH of additional time necessary to meet all of the framework requirements covering functional skills, ERR, mentoring and company training. This pathway will take 24 months to complete.[See 'on-the-job' pathway 1b].

Intermediate Level Radiation Protection Pathway 2a: 344 GLH
It is expected that the apprentice will complete 344 GLH 'off-the-job' in the first year of the apprenticeship, using the Level 2 NVQ Diploma in Radiation Protection(162 GLH) This is a combined qualification with 114 GLH designated as 'off-the-job' learning and 48 GLH designated as 'on -the-job learning. This will exceed the minimum legal requirement of 30% or 100 GLH 'off-the-job' per year.

This figure includes 230 GLH of additional time necessary to meet all of the framework requirements covering functional skills, ERR, mentoring and company training. This pathway will take 12 months to complete.[See 'on-the-job' pathway 2a]

How this requirement will be met

The guided learning hours for 'off-the-job' training can be met in a number of ways:

Pathways - Nuclear Decommissioning; Radiation Protection

Evidence:
Copy of a Certificate for the knowledge qualification –
• Level 2 Extended Certificate in Engineering or
• Level 2 Diploma in Engineering or
• Level 2 NVQ Diploma in Radiation Protection (Knowledge Units)
Copies of the required Certificates for Functional Skills or Key Skills
Copy of the completed assessors evidence document for Employee Rights & Responsibilities
Copy of the completed assessors evidence document for all six Personal Learning and Thinking Skills
Copy of a signed declaration from the training provider stating how the GLH for other types of 'off-the-job' training has been achieved.

Example: How the 'off-the-job' learning requirement will be met using Intermediate Level (Level 2) Nuclear Decommissioning Pathway 1a

• Level 2 Extended Certificate in Engineering (QCF) [180GLH]
• Level 1 Functional Skills Math's (alternatively Key Skill Level 1 Application of Number) [45GLH]*
• Level 1 Functional Skills English (alternatively Key Skill Level 1 Communication) [45GLH]*
• Level 1 Functional Skills Information Communication Technology (ICT) (alternatively Key Skill Level 1 ICT) [45GLH]*
• Company Induction and Employee's Rights and Responsibilities (ERR) [40GLH]
• Mentoring for the duration of the framework [40GLH]
• Other appraisals, company training [15GLH]

• **Total** [410 GLH]

* - Please refer to section on Transferable Skills for a list of exemptions or proxy qualifications.

Guided Learning Hours (GLH) should:

1. Achieve clear and specific outcomes which directly contribute to the successful achievement of the framework - this may include accredited and non-accredited elements of the framework;
2. Be planned, reviewed and evaluated jointly between the apprentice and a tutor, teacher, mentor or manager. It must also allow the Apprentice access to a tutor, teacher, mentor or manager, as and when required;
3. Be completed while working under an Apprenticeship Agreement and delivered during contracted working hours;
4. Be delivered through one or more of the following methods: individual and group teaching, distance learning, e-learning, coaching, mentoring, feedback and assessment, collaborative/ networked learning with peers and guided study;
5. Be recorded. (Example; in a log book or diary, completed attendance records or on an electronic/ online recording system, witness testimonies or video recordings.)

Minimum on-the-job guided learning hours

On-the-job GLH for Intermediate Level (Level 2) Pathways:

To understand the overall make up of the GLH within a pathway, the 'on-the-job' pathways below should be linked to their corresponding 'off-the-job' pathways described earlier in this document.

Intermediate Level Nuclear Decommissioning Pathways 1a & 1b: 254 GLH
Using the Level 2 NVQ Diploma in Nuclear Decommissioning (254 GLH). In year 1 a minimum of 190 GLH will be spent on-the-job, gathering evidence for the vocational qualification. The remaining 64 GLH will be undertaken in the last 3 months.

Intermediate Level Radiation Protection Pathway 2a: 48 GLH
Using the Level 2 NVQ Diploma in Radiation Protection (162GLH). [This is a combined qualification with 114 GLH designated as 'off-the-job' learning and 48 GLH designated as 'on-the-job' learning]. In year 1 a minimum of 48 GLH will be spent on-the-job, gathering evidence for the vocational qualification.

How this requirement will be met

On-the-job training may include any activity where an apprentice receives some form of instruction, tuition, guidance, support or feedback whilst carrying out their day to day role.

On-the-job training will consist of an apprentice meeting and demonstrating the skills and competencies in the competency qualification relevant to their selected pathway. This includes any time spent receiving on the job support, feedback and review of their job performance.

Intermediate Level Apprenticeship

Pathways - Nuclear Decommissioning; Radiation Protection

Evidence:
Copy of a Certificate for the competence qualification –
• Level 2 NVQ Diploma in Nuclear Decommissioing or
• Level 2 NVQ Diploma in Radiation Protection

Copy of any certificates for any training courses attended
Copy of any completed assessor/ monitoring reports
Copy of any signed declaration from the training provider stating how the GLH for other type of on-the-job training has been achieved.

Guided Learning Hours (GLH) should:
1. Achieve clear and specific outcomes which directly contribute to the successful achievement of the framework - this may include accredited and non-accredited elements of the framework;
2. Be planned, reviewed and evaluated jointly between the apprentice and a tutor, teacher, mentor or manager. It must also allow the Apprentice access to a tutor, teacher, mentor or manager, as and when required;
3. Be completed while working under an Apprenticeship Agreement and delivered during contracted working hours.
4. Be delivered through one or more of the following methods: individual and group teaching, distance learning, e-learning, coaching, mentoring, feedback and assessment, collaborative/ networked learning with peers and guided study.
5. Be recorded. (For example; in a log book or diary, completed attendance records or on an electronic/online recording system, witness testimonies or video recordings.)

Personal learning and thinking skills assessment and recognition (England)

Summary of Personal Learning and Thinking Skills

Personal Learning and Thinking Skills (PLTS) will be delivered through a combination of practical experience, experiential learning and/or through formal instruction dependent on how the individual PLTS relate to that particular unit.

The six individual PLTS have been mapped to the mandatory units of the vocational qualifications contained in this framework. The Cogent PLTS pack signposts where each learning outcome for the individual PLTS is embedded within the mandatory units.

As the apprentice completes the mandatory units they will need to highlight evidence of how the individual PLTS has been achieved. Evidence may be gathered in the form of a logbook, portfolio entries, observations, tasks and underpinning knowledge (UPK) tests. Within the PLTS pack there is a facility for the Apprentice to record/ signpost to relevant, supporting evidence that the skill has been used to get tasks done in the workplace.

The assessor will then need to check that this evidence is correct. A copy of the assessor's assessment documentation will then be submitted to the certificating authority as evidence that the PLTS has been achieved.

Alternatively, it is possible for Apprentices to undertake a specific QCF unit for PLTS which would be formally delivered, assessed and accredited. Some training providers may choose this option but this framework does not require the achievement of an accredited PLTS qualification unit.

It is important to note that the apprentice must acheive the standards of attainment for all 6 Personal Learning and Thinking Skills.

Further guidance can be obtained by downloading a PLTS pack from the Apprenticeships

section of the Cogent website. (www.cogent-ssc.com)

Creative thinking

Apprentices will need to show how they can think creatively by generating and exploring ideas, making original connections. They will try different ways to tackle a problem, working with others to find imaginative solutions and outcomes that are of value.

The creative thinking PLTS have been mapped to the mandatory units of the vocational qualifications contained in this framework. The Cogent PLTS pack signposts where each learning outcome for the individual PLTS is embedded within the mandatory units.

Independent enquiry

Apprentices will be expected to process and evaluate information within their work, planning what to do and how to go about it. They will take informed and well-reasoned decisions, recognising that others have different beliefs and attitudes.

The independent enquiry PLTS have been mapped to the mandatory units of the vocational qualifications contained in this framework. The Cogent PLTS pack signposts where each learning outcome for the individual PLTS is embedded within the mandatory units.

Reflective learning

Apprentices must evaluate their strengths and limitations, setting themselves realistic goals with criteria for success. They will monitor their own performance and progress, inviting feedback from others and making changes to further their learning.

The reflective learning PLTS have been mapped to the mandatory units of the vocational qualifications contained in this framework. The Cogent PLTS pack signposts where each learning outcome for the individual PLTS is embedded within the mandatory units.

Team working

Apprentices will be required to work confidently with others, adapting to different contexts and taking responsibility for their own part. They will listen to and take account of different views. They will form collaborative relationships, resolving issues to reach agreed outcomes.

The team working PLTS have been mapped to the mandatory units of the vocational qualifications contained in this framework. The Cogent PLTS pack signposts where each learning outcome for the individual PLTS is embedded within the mandatory units.

Self management

Apprentices must show how they can organise themselves, showing personal responsibility, initiative, creativity and enterprise with a commitment to learning and self-improvement. They will actively embrace change, responding positively to new priorities, coping with challenges and looking for opportunities.

The self management PLTS have been mapped to the mandatory units of the vocational qualifications contained in this framework. The Cogent PLTS pack signposts where each learning outcome for the individual PLTS is embedded within the mandatory units.

Effective participation

Apprentices must show how they have actively engaged with issues that affect them and those around them. They will play a full part in the life of their college or workplace by taking responsible action to bring about improvements for others as well as themselves.

The effective participation PLTS have been mapped to the mandatory units of the vocational qualifications contained in this framework. The Cogent PLTS pack signposts where each learning outcome for the individual PLTS is embedded within the mandatory units.

Additional employer requirements

None

apprenticeship
FRAMEWORKS ONLINE

For more information visit
www.apprenticeshipframeworksonline.semta.org.uk